THE

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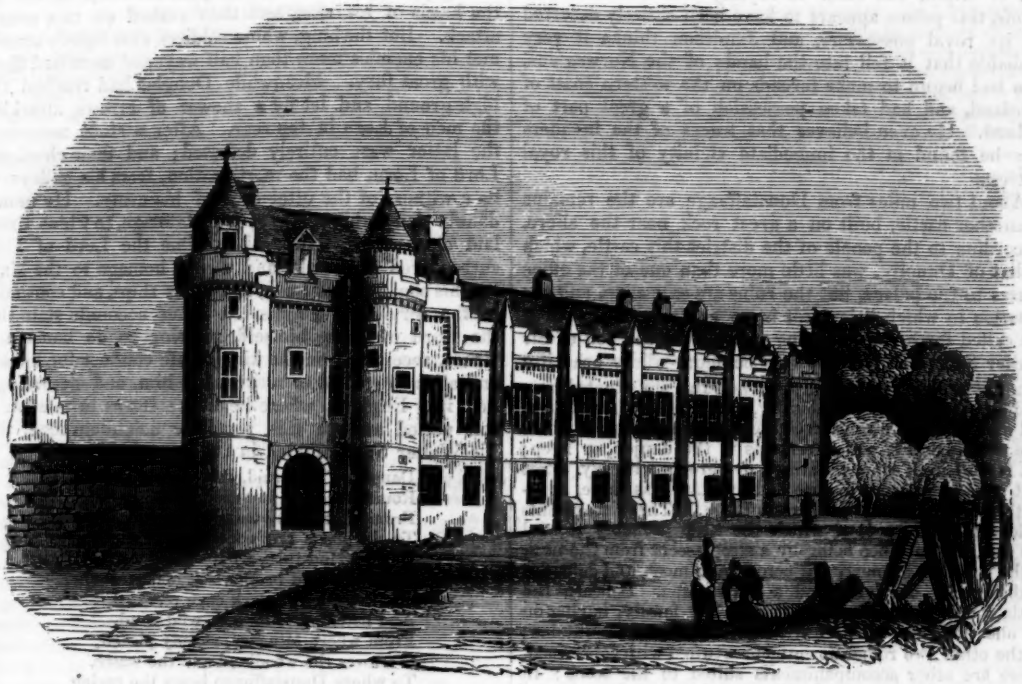
## THE ROYAL RESIDENCES OF SCOTLAND
II



### DUNSTAFFNAGE PALACE.

Seated on a rock, whose base is washed by the waves of the Atlantic, and commanding an extensive and magnificent view, the ancient palace of Dunstaffnage does honour to the judgment and taste of those who selected so secure and beautiful a site for a royal residence. That noble arm of the sea, Loch Etive, with its rocky bed, its whirlpools and its foaming torrent, runs far inland skirting the palace; the fertile island of *Lismore* or *Leasmore*, *i. e.* "the great garden," lies to the west, and beyond it rises the bleak and rocky Mull. The lofty mountains of Morvern terminate the prospect towards the north, and all around is a "pleasing interchange of mountain and valley, wood and water, sea and land."

Dunstaffnage is situated in Mid Lorn, one of the divisions of Argyleshire. According to Grose, the builder and the time of construction are unknown, but the palace is certainly of great antiquity, and was once the seat of the Pictish and Scottish princes. Here for a long time was preserved the famous stone, the Palladium of Scotland, brought, as the legend has it, from Spain. It was afterwards removed by Kenneth II. to Scone, and is now in Westminster Abbey, brought thither by King Edward I. The ancient Latin inscription on this stone was to the purpose that wherever the stone was found there should Scotland reign throughout the land. This "stone of power" was therefore an especial object of veneration and regard. The story of its wanderings is differently told. Wyntoun says, that Fergus, the son of Erc, brought it with him from Ireland into Scotland,

Fyrst quhen he come and wane that land,
And fyrst it set in Ikkolmkil
And Skune thare-eftir it wes broucht tyle;
And thare it wes syne mony day
Qhyll Edward gert have it away.—

This author omits the mention of Dunstaffnage, which others mention as one of its resting-places.

The palace or castle of Dunstaffnage is said to have been founded by *Ewin*, a Pictish monarch contemporary with Julius Cæsar, who named it after himself, *Evonium*. It is of a square form, eighty-seven feet within the walls, and having round towers at three of the angles. The average height of the walls is sixty-six feet; the thickness, nine feet. The external measurement of the wall is two hundred and seventy feet. The circumference of the rock on which it stands is three hundred. The entrance is from the sea by a staircase, but it is supposed that in former ages it was by means of a drawbridge. Only a part of the building is habitable, the rest being in ruins. The masonry is considered extremely ancient. At the distance of about four hundred feet from the castle are the remains of a chapel and family cemetery. The former is seventy-eight feet long, and twenty-six broad. Pennant, in visiting this spot, noticed a very remarkable echo, repeating words and sentences in a distinct, unbroken manner.

Some of the ancient regalia of Scotland were preserved at Dunstaffnage until the eighteenth century, when in consequence of the infirmity of the keeper, they were embezzled by the servants, who could not withstand the temptation of the silver that adorned them. Yet they left a battle-axe of very beautiful workmanship, nine feet in length, and embossed with silver. In Pennant's

*Tour in Scotland* an engraving is given of a small ivory figure found in a ruinous part of the castle, and which he thinks was certainly cut in memory of the celebrated chair, and appears to have been an inauguration sculpture. A crowned monarch is represented sitting in a chair, with a book or scroll in his hand, as if going to take the coronation oath. It would appear from the total silence of historians respecting the palace of Dunstaffnage, for a period of several centuries, that this ancient abode of kings lost much of its importance after the removal from within its walls of the famous and mysterious stone. When, on the union of the Picts and Scots, under the son of Alpin, the chair of royalty was transferred to Scone, this palace appears to have been entirely deserted by its royal possessors, and Jamieson thinks it very probable that it fell into the hands of the Norwegians, who had begun to make inroads on the western coast of Scotland, and had taken possession of a great part of Ireland. He even believes that traces of the invaders may be found in the immediate vicinity of this royal fortress.

About two miles from Dunstaffnage are the remains of another castle, built on a great rock near the shore. According to the people of the district this castle, which is that of Dunolly, was little more than one of the office houses to the palace, but the ruins are extensive, and the situation in which it is built is so commanding, that it has called forth the following notice from the pen of Sir Walter Scott. "Nothing can be more wildly beautiful than the situation of Dunolly. The ruins are situated on a bold and precipitous promontory, overhanging Loch Etive, and distant about a mile from the village and port of Oban. The principal part which remains is the donjon, or keep; but fragments of other buildings, overgrown with ivy, attest that it had been once a place of importance, as large, apparently, as Artornish or Dunstaffnage. These fragments inclose a court-yard, of which the keep probably formed one side, the entrance being by a steep ascent from the neck of the isthmus, formerly cut across by a moat, and defended doubtless, by outworks and a drawbridge. Beneath the castle stands the present mansion of the family, having on the one hand Loch Etive with its islands and mountains; on the other two romantic eminences tufted with copsewood. There are other accompaniments suited to the scene; in particular a huge upright pillar, or detached fragment of that sort of rock called plum-pudding stone, upon the shore, about a quarter of a mile from the castle. It is called *clach-na-cau*, or the Dog's Pillar, because Fingal is said to have used it as a stake to which he bound his celebrated dog Bran. Others say that when the Lord of the Isles came on a visit to the Lord of Lorn, the dogs kept for his sport were kept beside this pillar. Upon the whole, a more delightful and romantic spot can scarce be conceived; and it receives a moral interest from the considerations attached to the residence of a family once powerful enough to confront and defeat Bruce, and now sunk into the shade of private life."

The traditions of the neighbourhood consider this castle of Dunolly to have been the allotted residence of the medical practitioner in attendance on the royal family at Dunstaffnage, for the name of the castle, according to their interpretation, signifies "the fort of a physician." But Jamieson justly remarks, that not only the distance must have rendered it quite ineligible as a residence for one whose services would be often required at a moment's warning, but it is totally improbable that a place of such consequence would be assigned to any officer of the court.

We find that Dunstaffnage was possessed, in the reign of Robert Bruce, by Alexander of Argyle. This Alexander was the father of John of Lorn, and adhered to the interests of Baliol. Having on one occasion attacked Bruce, and driven him to great extremities, he was requited in a similar manner by a visit of the army to his territories in 1308. When Bruce arrived in the domain of the Lord of Lorn, and had reached a narrow and dangerous pass which runs along the bottom of Cruachin Ben, a high and rugged mountain between Loch Awe and Loch Etive, he received private intelligence that an ambuscade had been laid for him by the men of Lorn, in the pass through which he intended to march; and that the Lord of Lorn himself lay with his galleys at Loch Etive, and awaited the result. On this intelligence Bruce divided his army into two parts, and ordered Douglas with one division, consisting entirely of archers, who were lightly armed, to make a circuit round the mountain, and take possession of the high ground above the spot where the Highlanders were concealed. Bruce then entered the pass, and in its narrow gorge was attacked by the men of Lorn, who rushed from their hiding-place with loud shouts, hurled down stones on the heads of his men, and then rushed on to a nearer attack. But the king, whose soldiers were lightly armed, met his enemies more than half-way, and assaulted them with great fury. Meanwhile Douglas had reached the high ground, and let fly a shower of arrows, attacking the men of Lorn in the rear. After a stout resistance the latter were entirely defeated; and their chief, the Lord of Lorn, had the mortification, from his galleys, to be a witness of the utter rout of his army. He immediately fled to his castle of Dunstaffnage, to which Bruce laid close siege. In a short time the Lord of Lorn surrendered his castle and swore homage to the king; but his son, John of Lorn, fled to his ships, and continued in the service of England. Other accounts state that the Lord of Lorn himself, refusing to do homage to Bruce, received from the king a safe conduct for himself and all who wished to retire with him, and accordingly fled into England, where he died. It was in relation to this period and to this romantic neighbourhood, that Sir Walter Scott alluded in the following lines.

"Daughter," she said, "these seas behold,
Round twice an hundred islands roll'd,
From Hirt, that hears their northern roar,
To the green Ilay's fertile shore;
Or mainland turn, where many a tower
Owns thy bold brother's feudal power
Each on its own dark cape reclined,
And listening to its own wild wind,
From where Mingary, sternly placed,
O'erawes the woodland and the waste,
To where Dunstaffnage hears the raging
Of Connal with his rocks engaging."

The Lords of Lorn were firm in their adherence to the cause of Baliol, and by this means lost the greater part of their lands, and among the rest Dunstaffnage, which fell into the hands of the Argyle family. Thus Sir Walter Scott says, "When the wars between the Bruce and Baliol factions again broke out in the reign of David II., the Lords of Lorn were again found on the losing side, in consequence of their hereditary enmity to the house of Bruce. Accordingly, upon the issue of that contest, they were deprived by David II., and his successor, of by far the greater part of their extensive territories, which were conferred upon Stewart, called the Knight of Lorn. The house of Macdougal continued to survive the loss of power, and affords a rare, if not an unique instance of a family of such unlimited power, and so distinguished during the middle ages, surviving the decay of their grandeur, and flourishing in a private station."

About four miles from Dunstaffnage, on the opposite side of the ferry, are the remains of an ancient town, which was doubtless the capital of the former kingdom. It is situated between two hills, and a street paved with common stones is still called "the market street," and another place, at a little distance, goes by the name of "the meal street." Some years ago a man cutting peat discovered one of the wooden pipes that conveyed water from the one hill to the other at the depth of five feet below the surface.

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FRIENDSHIP is, strictly speaking, reciprocal benevolence, which inclines each party to be solicitous for the welfare of the other as for his own. This equality of affection is created and preserved by a similarity of disposition and manners.—PLATO.

### ON THE ABUSE OF LITERATURE.

Among the pleasures and pursuits of our ordinary life, there are none which take stronger hold on minds of intelligence and sensibility than those of literature; nor is it possible to look without pleasure and approbation upon the application of a young ingenuous mind to such avocations. Yet a suspicion will often steal in among such reflections, that there is some secret peril lurking in this path of flowers, which may make it necessary for the mind, in the midst of its delights, to be jealous of its safety. Literature brings back to the mind, in a kind of softened reflection, those emotions which belong in nature to the agitating scenes of reality. From the storms of society, from the agony of forlorn hope, from the might of heroism, from the transport of all passions, there is brought to us in our own still seclusion the image of life; our intelligence and sensibility are awakened, and with delight and admiration, with a shadowy representation to ourselves of that which has been absolutely acted, we consider the imaginary world. Love, and hope, and fear, and sorrow, shadowy resemblances of great passions, pass through our hearts; and in the secret haunts of imagination we indulge in contemplating for our mere pleasure, that which has consumed the strength and the whole being of our kind. We sever ourselves for a moment from the world, to become sympathizing and applauding spectators of that very drama in which our own part awaits us. We turn the dread reality of existence into a show for indolent delight.

Indeed, we can scarcely describe the pleasures which our imagination seeks in works of literature, without indicating the two-fold and various tendencies of its pleasures. As the image of our condition warms our heart towards our kind, as it enlarges our conception of our own or their nature, it tends, by raising our minds, to fit us more nobly for the discharge of its duties. But as it gives us without reality the emotions we need; as it indulges the sensibility which it is flattering to ourselves to feel; as it separates for our gratification the grandeur of heroic strength from its endurance, and gives us the consciousness of all that is good for our own nature, without the pain or peril which puts its strength to the proof; it tends to soothe and beguile us with illusory complacence in our own virtue; to sever our spirits from that hard and fearful strife, in which alone we ought to think that we can rightly know ourselves; and therewithal it tends in the effect to sever us from our kind, to whom it seems, nevertheless, to unite us in our dreams and visions.

To the young mind, therefore, the indulgence in the pleasures which imagination finds in the silent companionship of books, may be regarded as often very dangerous. It is unconsciously training itself to a separation from men during the very years which should train it to the performance of the work in which it must mingle with them. It is learning withdrawn itself from men, to retire into itself, to love and prefer itself, to be its own delight and its own world. And yet a course meanwhile awaits it, in which the greater part of time, strength, thought, desire, must be given up to avocations which demand it from itself to others, in which it must forego its own delight, or rather must find its delight in service which abstracts it from itself wholly, and chains it to the world.

Life allows only lowly virtue. Its discipline requires of us the humblest pleasures, and the humblest service; and only from these by degrees does it permit us to ascend to great emotions and high duties. It is a perpetual denial to ambition, and requital to humility. But imagination is ambitious, and not humble. It leaps at once to the highest, and forms us to overlook the human possibilities, and to scorn the lowly service of earth. Not measuring ourselves with reality, we grow giants in imagination; but the dreamed giant has vanished with the first sun-ray that strikes on our eyes and awakes us.

Yet the pleasures of imagination cannot be withheld from youth, for the spirit is full of imagination, and has power within itself for its own delusion. But bad education may withhold from imagination, the nobler objects of its delight, and leave it fettered. It is the habitual indulgence that is injurious, and not the knowledge by imagination of its greatest objects. As years of youth rise upon the mind, its pleasure should be connected with the severest action of intellect, by never offering to the mind in books the unrestrained wild delight of imagination; but indulging to it the consciousness of that faculty only in the midst of true and philosophical knowledge.

The pleasures of literature are thought to make the mind effeminate, which they do, inasmuch as the cultivation of letters is at variance with the service of life. The service of life strengthens the mind, by calling upon it always to labour for a present or definite purpose;—to submit its desires, its pleasures, rigidly to an object. It does not deny pleasure—it yields it; but only in subordination or subservience to a purpose. It requires and teaches it to frame its whole action by its will, and to become master of itself. In short, it is the part of imagination to raise the mind, and to strengthen its sensibility; but it must not be allowed to unnerve and disorder its force of action.—*Noctes Ambrosianæ*, LIX.

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A person might as well refuse to speak the language of a country, as to comply with its customs in matters of indifference; like it, they are signs, which, though unmeaning, perhaps, in themselves, are established by general consent to express certain sentiments; and a want of attention to them would appear to express a want of those sentiments, and, therefore, in regard to others, would have a bad effect. But though the neglect of these things be blameable, those who consider them as the essential part of true politeness are much wider of the mark, for they may be strictly observed where that is entirely wanting.—Bowdler's *Essays*.

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### ON THE NATURE AND USE OF THORNS.

In barren and uncultivated tracks of heath or common land thorny plants abound, for example, the sloe (*Prunus spinosa*), the rest-harrow (*Ononis spinosa*), the hawthorn (*Cratægus oxyacanthus*), the buckthorn (*Rhamnus*), the cockspur thorn (*Cratægus crus Galli*), and many others. These vegetables, when removed into gardens and cultivated with care, lose all their thorns, which so thickly beset them when wild, and bear fruitful branches in their stead, becoming, as Linnæus expressed it, *tamed plants*, instead of the warriors (or *Milites*, to use his language) which they were before. Willdenow was the first who explained the reason of this change, by showing that thorns are abortive buds, buds which a deficiency of nourishment prevented from becoming developed into branches, and which, when the requisite supply of food is present, speedily evolve their latent leaves and flowers. But Willdenow did not perceive the beautiful adaptation of means to ends, which forms by far the most interesting part of the phenomenon.

In open barren tracts of country, the very circumstance of the sterility of the soil must prevent the production of many plants, and of those which grow, few will be enabled to perfect many seeds. It is necessary, therefore, to protect such as are produced from extermination, by the browsing of cattle, otherwise not only would the progeny be cancelled, but also the present generation be cut off. And what more beautiful and simple expedient could have been devised, than ordaining that the very barrenness of the soil, which precludes the abundant generation of seed, should at the very same time, and by the very same means, render the abortive buds (abortive for the production of fruit), a defensive armour to protect the individual plant, and to guard the scantier crop which the half-starved stem can bear?

That such an armature is produced by the abortion, or partial development of buds and branches, there is abundant proof. For not only are thorns found in every stage, varying from their simple dormant, or winter state, when, if opened, they contain the rudiments of leaves, through leaf-bearing spines, to rigid thorns, on the one hand, or leaf-clad branches, on the other; but the very organs, that is, the buds, which, when the plant is half-starved, are partially developed as spines, and part only as branches, become, when an abundant supply of nourishment is provided, altogether leafy branches; the buds have all been wholly developed, none have degenerated into thorns, and the plant is tamed. The rest-harrow (*Ononis arvensis*) is a familiar example immediately in point, for of it there are two well-known varieties called *Ononis spinosa* and *Ononis inermis*, from the circumstance of this being smooth, and destitute of thorns, while that is covered with them. These two varieties I have often seen growing together on the same heath: the one, well clad with its offensive and defensive arms, and furnished with few leaves to tempt the appetite of cattle; the other, upon or near to which manure had casually been dropped, replete with leaves and blossoms, but wholly destitute of thorns, and just in such a state as to furnish an agreeable repast to the animal by which it had been fertilized.—Burnett's *Outlines of Botany*.

## THE MUSIC OF THE CHINESE.

### I.

ALTHOUGH a certain degree of skill is exhibited by the Chinese in the construction of musical instruments, yet we are not able to give a very favourable account of their taste, or ability to produce melodious and harmonious sounds from them. However, we propose to describe their music, such as it is, and to notice the more popular of their musical instruments, which may have already excited the curiosity of such of our readers as have visited the Chinese Museum, at Hyde Park Corner, where they are now exhibited.

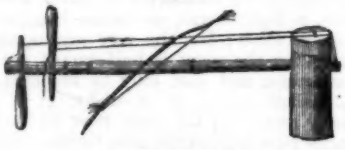
The Rev. Mr. Gutzlaff remarks, that had he not seen a very elaborate treatise on the Music of the Chinese in the *Mémoires sur les Chinois*, he might have asserted that this people have no music, having been so frequently deafened by the sound of their gongs and other instruments. Though he was present at marriages and funerals, and at the review of troops, he was never able to make out a single air.

Musical notes, (he remarks,) though known, are not in common use. A band of music consists of the loud gong, large and small drums, cymbals, pipes, various flutes, trumpets like those made for children, horns, an instrument with many pipes resembling a small organ, a guitar with one or two strings, and a violin with three strings, and a variety of others, amongst which are bells hung up in a frame, in order to give an harmonious chime. The principle on which a concert is played, appears to be, which of the musicians shall outdo the other in loudness of sound, in which attempt the beater of the gong generally succeeds to admiration. At Peking there is an imperial board of music, and the court maintains several bands, which play the customary airs. Some Chinamen finger the guitar tolerably well, and accompany this with a song, yet the nation has no musical ear, nor are the instruments very harmonious. Like most things in China, they are the first efforts of invention, left in an imperfect and unfinished state for want of farther improvement.

Mr. Gutzlaff also states that the Chinese do not enjoy our music, nor do they ever attempt to imitate it, having, apparently, none of the finer perceptions of melody and harmony, and being only susceptible of harsh tones.

But this unfavourable report is somewhat qualified by the statements of Mr. Lay, who, in his interesting work entitled *The Chinese as they are*, gives a minute and excellent account of the state of musical knowledge and practice among this people. This gentleman not only made himself acquainted with the different instruments in use among them, and the amount of skill employed in their use, but became himself the pupil of their musicians, and seems to have acquired considerable facility in performing the peculiar evolutions which are the characteristics of Chinese style. From his pleasing description we gather such particulars as may give our readers a fair idea of the music of China.

Fig. 1.



THE CHINESE REBECK.

First among tne instruments is mentioned a very rude and primitive kind of fiddle with two strings, the "scrannel" sounds of which are often heard at dayfall beneath the shade of the fig-tree, or in some retired corner. This is the *urh heen*, or Chinese rebeck, a screeching instrument, most unpleasing to the ears of Europeans, but probably "the parent of our violin, and as old as Jubal himself." The strings are tuned at the interval of a fifth from each other, as in the violin, a mode of tuning not followed in any of the other Chinese instruments. The sound-board is covered with the skin of the tan-snake, a small kind of boa, and the hairs of the bow pass between the strings, as represented in the cut. As the strings are very near each other, the difficulty of playing is to press the bow fairly upon one string, without touching the other.

Out of this wretched thing (says Mr. Lay) performers contrive sometimes to draw sounds of great brilliancy, so that I have heartily wished them a better tool for their pains. Such is the result of much practice.

There are three sorts of guitar in common use in China, the *pepa*, the *san heen*, and the *yue kin*. The pepa is a pretty instrument about three feet long, balloon-shaped, with four silken strings. The table, or upper surface, is plane, let into the back and unvarnished. It is furnished with twelve frets, on little slips of bamboo glued upon it. The strings are tuned at the intervals of a fourth, a major tone, and a fourth, so that the outer strings are octaves to each other.

The intervals upon the *pepa* agree very nearly with our own, but the player generally avoids the half-note. I asked my instructor why he did this, but the question confounded him greatly; so that his friend, who had introduced him to my acquaintance, addressed him in an angry tone, "You do not know!" To make him understand my question, I showed him that in passing a whole tone on the violin I could thrust the nut of my bow between my fingers, but in the case of the half-note the fingers were close together. He then followed me upon the *san heen* as I ran up the scale, and discovered that his own fingers corresponded to mine. He and his friend were humbled at this, and could not forbear muttering, in subdued tones, their conviction of the foreigner's intellectual reach. "These *fan-kwei* understand things!" is, indeed, a mortifying conclusion, but it cannot be helped.

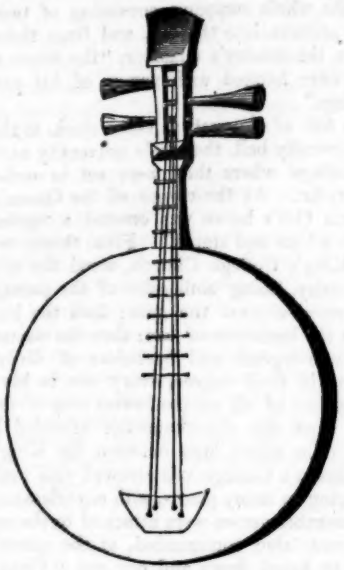
Fig. 2.

THE THREE-STRINGED GUITAR.

Our illustration (fig. 2) represents the *san heen*, or three-stringed guitar, made of the *swan*, a wood brought to China, it is said, from Siam and Tonquin. It resembles our cherry and pear-tree wood. This instrument has a very long neck and head, with a drum-shaped, cylindrical body, covered with the skin of the tan-snake. The strings are tuned as fourths to each other, and the sounds produced are low and dull, and adapted for subduing the shrill sounds of the pepa. There seems to be nothing like a score among the Chinese, but one plays from memory, and another accompanies him with the best ideas of harmony he is master of. The nota-

tion of the Chinese is simple, consisting of nine symbols, with the addition of *man* or *yin* on the left hand, when the sounds are either above or below the usual compass. There is no time table, but they mark the time by the foot as we do. There is no sign by which slow notes can be distinguished from quick, so that no one can play a Chinese air from the notes unless he has heard it previously from a native. Such is the imperfection of Chinese written music.

Fig. 3.



FULL-MOON GUITAR.

The *yue kin*, or full-moon guitar (fig. 3), is made of *swan* wood, and is perfectly circular. It has four strings, which stand in pairs, and are unisons with each other. The interval of a fifth is interposed between the two groups. The sound, which is sharp and keen, is drawn out by forcibly striking the string with the nail, or with a plectrum of wood or metal. In some cases this instrument is used as an accompaniment to the rebeck, or fiddle.

The *kin*, or scholar's lute, is a beautiful instrument, difficult to manage, and having a complex system of notation peculiarly its own, and apparently intended to keep the vulgar herd from meddling with it. It was played upon by Confucius and the sages of antiquity, and is therefore held sacred by men of letters. It is made of the *wootung* wood, or *Dryandria condifolia*, and is convex above and plane below. It has seven strings, which pass over the smaller end, and are fastened to two pegs below. A bridge, within a short distance of the wider extremity, affords them the necessary elevation and a passage to the under surface; where they are tightened or relaxed by a row of pegs, which are, in some cases, of precious stones. Each position of the hand, in playing this instrument, has not only an appropriate name, but also its type in the visible world around. One position is compared to a butterfly just flitting over a flower; another to a bird catching a cicada upon the wing; a third to a flower floating upon the water; and so on to the number of thirty-three.

There is a real value in these rules, (says our author,) for they not only impart a beauty to manipulation, but they entirely remove that monotony which the ear perceives in the sounds of the guitar or harp, from the fact that the strings are generally plucked, or struck in the same uniform manner.

The sliding of the left hand fingers, and the trilling, and other evolutions they are made to execute, constitute the main characteristics of the Chinese style.

My teacher (says Mr. Lay) was a tea merchant from Fukkeen province, who had, as Chinese have generally long taper fingers, which he could display in very great perfection. He had little idea as to the best method of communicating instruction, so that my first attempts to get at his meaning were sadly baffled. A Chinaman shows you the outskirts of a thing, but seldom introduces you at once to the mystery you are in quest of. This method of tuition, if not the most economical way of employing time, is an admirable exercise of patience.

It appears that the notation for the kin, or scholar's lute, is very complex, while that for other instruments is, as we have said, extremely simple. Each note is a cluster of characters; one denotes the string,—another the stud,—a third informs you in what manner the fingers of the right hand are to be used,—a fourth does the same in reference to the left,—a fifth tells the performer in what way he must slide the hand before or after the appropriate sound has been given,—and a sixth says, perhaps, that two notes are to be struck at the same time. Every air on this instrument costs the performer several months' labour, so that it is, indeed, a kind of music which is in no danger of becoming common, being only attainable by those who have much leisure to bestow on the task.

There are several other instruments of the lute kind, which have varying numbers of strings. One described in the *Leke* has twenty-five strings, and seems to be identical with that in common use. The strings are of copper or brass wire, and are each of them provided with a moveable bridge, or *horse*, as it is called: by means of this moveable bridge the scale can be adapted to any other instrument at the performer's pleasure. The tuning of instruments is a tiresome and complicated business in China, but it makes amends for the labour by the variety of effect it is capable of producing. The *tsang* is a kind of lute with sixteen strings of wire, which are tuned by the help of the octave; but that interval includes only six, instead of eight notes. The half-notes are thus disposed of without inconvenience.

The *yan kin* is a kind of dulcimer furnished with brass strings, which are struck with two small hammers. It is the rudiment of the piano-forte; when touched by a skilful hand, it yields a very gay and lively combination of harmonious and melodious sounds.

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## QUEEN ELIZABETH'S VISIT TO CAMBRIDGE IN 1564.

### I.

THE recent visit of our beloved queen and her illustrious consort to Cambridge, and the reference made by the university on the occasion, to the visit of Queen Elizabeth in 1564, have induced us to invite the reader's attention to an abstract of the many curious notices of the visit of Elizabeth. These notices are for the most part contained in a MS. work entitled *Triumphs of the Muses, or the Grand Reception and Entertainment of Queen Elizabeth at Cambridge*, 1564. Mr. Nichols collated this MS. with a work entitled *Queen Elizabeth's Coming to Cambridge*, 1564, contained in the Harleian Collection, and printed the whole in his *Progresses and Public Processions of Queen Elizabeth**.

During the year that Queen Elizabeth visited Cambridge, the plague had not fully ceased in London, which circumstance probably induced her to visit several parts of her dominions, and among others the University of Cambridge. As soon as this intention was decided on, Sir William Cecil, Chancellor of the University, addressed a letter, dated "Grenewich, 12 of Julii 1564," to his Vice-chancellor, acquainting him with the queen's design, and wishing him to confer with the masters of the colleges, and then decide "what odginge shal be metest for her majestie, and next, what maner of plesures in lerninge maye be presented to her majestie, who hath

* See *Saturday Magazine*, Vols. XII. and XIII.

knowledge to understande very well in all common sciences." He was also to confer with the mayor of the town as to how it might best be "preserved from contagion of plague." "As for myself," says Sir William, "I meane to lodge with my olde nurse, in St. John's college: and so I praye youe informe the master." The letter concludes thus: "My desire is that two things maye speciallye appeare in that universitye; order and lerninge. And for order I meane bothe for religion and civill behaviour. And thus, being pressede with muche business, I am hastely forced to ende my scribblinge."

A notice of the queen's intended progress to Cambridge was also sent by Grindall, Bishop of London, to the vice-chancellor and heads of the university, requesting them "to put themselves in all readiness to pleasure her majestie, and to welcome her with all manner of scholastical exercises; viz., with sermons, both in English and Latin; disputations in all kind of faculties; and playing of comedies and tragedies; orations and verses, both in Latin and Greek, to be made and set up of all students in the way that her majestie should go or ride."

On the receipt of this intelligence, great stir was made at Cambridge in order to prepare a welcome worthy of so distinguished a guest. All the members of the university had their several duties appointed for them; it was arranged to meet her majesty at the west door of the King's College Church, with a canopy borne by four doctors; the officers were to deliver up their staffs of office; the provost of the college was to stand with all his company in their copes. They also settled the ringing of the bells; the order of the proctor's oration to be made in the name of the university; they also gave directions for erecting a stage in St. Mary's church, settled what questions were to be disputed, and who were to be the disputants; what was to be the sermon *ad clerum;* the order of the comedies and tragedies; the verses to be made and approved by the most learned in every college; how such verses were to be compiled in one book to be given to the queen; as also the book of the founders and benefactors of every college, and the names of the great and learned men who had been brought up in the same.

King's College being appointed as the place for her majesty to "lye in during her continuance in Cambridge," a notable store of beer, ale, and wine was sent thither. Then appeared in the town a number of officers of the court to take up the queen's lodging, and to know when any died of the plague; they also brought certain information that the queen would be at Cambridge on Saturday, the 5th of August. Whereupon the vice-chancellor and the mayor saw to the well-paving of the town, and ordered that every inhabitant should provide a sufficient quantity of sand to cover the streets with, at the queen's coming.

In the midst of their anxiety, lest they should not shew themselves sensible of the high honour about to be conferred upon their university, they received with pleasure a letter from Lord Robert Dudley, stating, that as their intended exercises were designed purely for the queen's entertainment, they need not in the least fear but that they would be accepted and taken in good part by her. "Presuminge with how good myndes youe will offer all things; and, knowinge howe far her highnes doth esteme good-will above any other gifts; let this perswade youe, that nothinge can be with better will done by youe, than yt wil be graciously accepted of her; whose vertues and princely dispositions, agreable with all other excellente lerning, is suche, as yt cannot be, but as youe shall have all things well taken as youe woulde desier; so shall youe be otherwise as well satisfied as youe can wishe."

A few days before the queen's visit, Sir William Cecil wrote again to his "veray lovinge frende Mr. Doctor Hawforde," the vice-chancellor, expressing his anxiety lest the queen at her coming should not be entertained to her satisfaction. He also complained of an "unhappy greffe" in his foot; to which, it will be seen, the queen alluded during her visit.

On the 4th of August, Sir William Cecil arrived at Cambridge, and reviewed the preparations that had been made for the queen. In this duty he was accompanied by the vice-chancellor, the heads, and the proctors, who, before their departure, presented him with two pair of gloves, a march-pain, and two sugar-loaves.

Then arrived Lord Robert Dudley, who "first did peruse the queen's lodging," and then the church and the approaches thereto. He then proceeded to his lodging at Trinity College, at the gate of which he was received by the master with an oration. He passed through the whole company, consisting of two hundred and four persons, into the hall, and from thence to his lodging in the master's chamber, "the doors and walls whereof were hanged with verses of his praises and well coming."

On the 5th of August, at two o'clock, at the ringing of the university bell, the whole university assembled in King's College, where they were set in order by the chancellor, &c. At the corner of the Queen's College and Martin Gill's house was erected a "great falling-gate, with a lock and staple." From thence to the west door of King's College Church, stood the members of the university, lining both sides of the passage. The scholars stood nearest the gate; then the bachelors of arts; then the bachelors of law; then the master regents; then the non-regents and bachelors of divinity; then the doctors in their degree, every one in his habit and hood; and last of all, on the lowest step of the western entrance, stood the vice-chancellor attended by "three bedells." The whole lane between the King's College and the Queen's College was strewed with rushes; flags were hanging in many places, with coverlets and boughs; and innumerable verses were attached to the wall. The scholars were also commanded, at the queen's passing by them, to kneel down and cry out "Vivat Regina," and after that to depart quietly to their several colleges, and not on any account to venture near the court, the disputations, or the plays; but if upon any just occasion they were obliged to go into the town, they were to walk in companies two and two.

King's College Church was hung about with fine tapestry, and the floor was strewed with rushes. A rich travas of crimson velvet was hung up on the south side of the church; and in the middle of the rood loft was erected "a fair closet glazed, if the queen's majestie perhaps would there repose herself." In that part of the church where the queen was to sit "a fair Turky carpet was laid; and, upon that, a little joined short forme set, covered also with one other Turky carpet; and one cushion to kneel upon, and one other to lean upon, of cloth of gold; and thereon was laid the Bible in Latin. Also there was set a chair of red velvet for her majestie to have set in, whilst she heard the oration, if she had forsaken her horse." The bells of the colleges and also of the town were rung during the afternoon. "Such churches as were negligent herein were afterwards fined, some 8*s.* 4*d.*, some more, some less."

Matters being thus arranged, the mayor and corporation of Cambridge proceeded on horseback to meet her majesty. A little above Newnham they perceived the royal *cortège*, and having alighted from their horses the recorder delivered an oration in English; and the mayor delivered the mace, "with a fair standing cup, which cost £19, and twenty gold angels in it, which her majesty received gently; and redelivered the mace to the mayor, and tooke the cup, &c., to one of her footmen." At Newnham mills, the queen being requested to change her horse, she alighted and went into the miller's house, where she remained a short time.

In the mean time the good people of Cambridge were in anxious expectation: "Sir William Cecyl sate upon his horse at the gate beyond the Queen's College," and caused certain of his guard to keep the street clear. "Then came the trumpeters, and, by solemn blast, declared her majestie to approach. Then followed the lords in their order and degree. Her Almoner, the Bishop of Rochester, bareheaded; with the Bishop of Ely. Then Garter king at arms, in his royal cote; with divers sergeants at arms.

Then the Lord Hunsdon, with the sword in a royal scabbard of goldsmith's work. And after him, the queen's majestie, (with a great companie of ladies and maids of honor) who, at the entering of Queen's College was informed, by Mr. Secretary, of the scholars, of what sort they were. And the like he did of all other companies and degrees." When the queen arrived at the place where the scholars were standing, two of them stepped forward, kneeled down with papers in their hands, which they first kissed and then presented. These papers contained orations gratulatory, one in verse, and the other in prose. Similar orations were presented by the bachelors of arts, and the masters of arts, all which the queen received graciously, and handed to one of her footmen. Having reached the place where the doctors were standing, all the lords and ladies dismounted from their horses, her majesty only remaining on horseback.

The queen is described as being dressed, "in a gown of black velvet pinked; a call upon her head, set with pearles and pretious stones; a hat that was spangled with gold, and a bush of feathers."

When the queen had arrived at the west door, which together with the walls was "covered with verses," Sir William Cecil kneeled down and welcomed her majesty. The officers, kneeling, kissed their staves and delivered them to Sir William, who also kissed them and then delivered them to the queen; but the number was so great that she could scarcely hold them. "And her grace gently and merrily re-delivered them, 'willing him and other magistrates of the university, to minister justice uprightly, as she trusted they did. Or she would take them into her own hands, and see to it.' Adding, 'that, although the chancellor did hault, (for his leg was sore, as is before mentioned,) yet she trusted that Justice did not halt.'"

The master of King's College then came forward, and having bowed three times and kneeled down on the first step of the western entrance, he delivered an oration in the name of the university which lasted half an hour, which every now and then was interrupted by some good-humoured ejaculation of the queen; for when the orator "praised and commended many and singular virtues set and planted in her majesty," she shook her head, bit her lips and her fingers, and exclaimed several times, "Non est veritas, et utinam—."

At the conclusion of his speech the queen praised the excellent memory of the orator, and said "she would answer him again in Latin, but for fear she should speak false Latin, and then they would laugh at her."

The queen having alighted from her horse, the dignitaries of the university were presented to her, one by one, her majesty presenting to each her hand to be kissed. She then entered the church under shelter of a canopy which was borne by four of the principal members of the university. The queen was much struck with the beauty of the chapel, and praised it above all others in her realm.

After spending some time in devotion the queen retired to her apartments "thanking God that had sent her to this university, where she, altogether against her expectation, was so received that she thought she could not be better."

The provost, who was "revested in a rich cope, all of needle-work," and others, then met her majesty before she had reached her apartments, and presented her in the name of the university, four pair of Cambridge double gloves, edged and trimmed with two laces of fine gold; "and six boxes of fine comfitts and other conceits," all which her majesty "thankfully took."

In our next number will be concluded this notice of "the Queen's Entertainment at Cambridge."

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. . . . . True, indeed, it is
That they whom death has hidden from our sight,
Are worthiest of the mind's regard; with them
The future cannot contradict the past—
Mortality's last exercise and proof
Is undergone.—WORDSWORTH.

## ON SPARS AND CRYSTALS.

### I.

THE least observant eye is arrested by the beauty of spars and crystals. The garden grottoes of country children are lit up with fragments of the most sparkling of the neighbouring rocks. One of the most frequent ornaments of the mantelpiece, next to sea-shells, are lumps of crystallized minerals, admired, some for their bold and angular forms, with facets polished by nature, and reflecting each a sheet of light. Others, either clear of colour, or transparent as the purest glass, or variously tinted, present the appearance of gigantic gems. Nor is art without her sparry products. The wonderfully simple laws of attraction, that by silent and long-continued action build up within the cavities of rocks the solid crystal, have been made obedient to the chemist, who, by this agent, reproduces many of the raw materials of the earth's crust in the purer and more convenient forms of commerce.

A crystal, or spar, is not a kind or variety of matter, but merely a state or form in which many kinds of matter may exist. Hoar-frost, for example, is dew frozen and crystallized by cold. But this is not permanent at ordinary temperatures. A few rays of sunshine are for the most part sufficient to unloose, in this case, the contracting and condensing force of cold. The particles of matter no longer hold each other together in the solid mass, but fall down to the level of a liquid; and as the sun rises in the heavens more warmth is absorbed by the surface of the earth where his beams are most direct. The atoms that constitute the melted hoar-frost are thus further removed from the sphere of their mutual attraction by the expanding force of increased heat, and at a certain point of temperature fly apart from each other, and rise into the atmosphere under the form of mist or vapour. This, again, will perhaps be re-condensed on the following night, and frozen once more into the fringe-work of tiny crystals that so frequently adorn every spray and leaflet of the wintry landscape. And so with sulphur, the vapour of which is familiar to all on account of its suffocating smell Active volcanoes send forth large and constant volumes of sulphureous vapours, which likewise become condensed by cold into what may be called a mineral hoar-frost, encrusting every surrounding object with yellow, mossy crystals.

The different degrees of force with which the power of attraction acts on matter are seen in the different *textures* of crystals, which are sometimes exceedingly hard and difficult of division, as the diamond and rock-crystal, while others are comparatively soft or brittle, as common salt and calcareous spar. We must remember that every mass of matter, whether we consider a planet or a mote in the sunbeam as separate bodies, is, to human sense, made up....the mote as well as the planet....of an infinite number of particles, or atoms, or molecules, as they are variously called. "It seems probable to me," says Sir Isaac Newton, "that GOD in the beginning formed *matter* in solid, massy, hard, impenetrable, moveable particles, of such sizes and figures, and with such other properties, and in such proportion to space, as most conduced to the end for which He formed them; and that these primitive particles, being solids, are incomparably harder than any porous body compounded of them; even so very hard as never to wear or break in pieces, no ordinary power being able to divide what GOD himself made one in the first creation."

In order that these particles should assume a regular crystalline form, it is obvious that they must have freedom of motion, and this mobility they possess in a marked degree when in the liquid state. If we dissolve some common salt in water, the fluid will immediately overcome the attraction that bound the atoms of salt to each other in a solid mass; in other words, the bond of union between the atoms is unloosed, and they become distributed at regular distances throughout the water.

If the quantity of fluid be considerable, the particles or atoms will be too far asunder to attract each other once more into a solid body, until some of the water be evaporated, when they will approach each other with admirable order, and form a regular cubic crystal. The experiment may be tried on the smallest scale. Dissolve a tea-spoonful of common salt in a wine-glass of water, and place a drop of the clear liquor upon any clean surface very gently warmed, a strip of plate-glass, or marble mantelpiece, will answer well. As the water evaporates, the salt will crystallize, and if examined by the microscope will exhibit a number of small cubes, as represented in the woodcut. If treated in the same manner Epsom salts will be found to solidify into *four-sided prisms*, nitre into *six-sided prisms*, and Glauber's salt, or sulphate of soda, into *striated six-sided prisms*.

COMMON SALT.

EPSOM SALT.

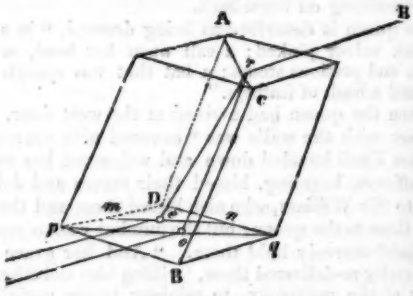
GLAUBER'S SALT

NITRE.

Thus different bodies crystallize under different forms, and these figures serve, to a certain extent, as a ground of distinction, and are accordingly employed to distinguish one mineral from another. But some bodies assume various forms. Calcareous spar, for example, which is crystallized carbonate of lime, occurs in every kind of rock, and under more numerous forms than any other substance. As many as six hundred and eighty modifications of this mineral have been described and figured, yet the confusion that would seem to ensue from this great variety of external character is only apparent, for if all these six hundred and eighty varieties are pared down, as it were, to their kernel or nucleus, this central body will be of the same shape in each.

It was long known to diamond-cutters that that precious gem might be split in certain directions with greater facility than others, but M. Haüy was the first to employ cleavage in the regular dissection of crystals. He took a six-sided prism of CALCAREOUS SPAR, and attempting to split it by the edge of a knife, gently struck on the back with a hammer, he found that of the six edges of the superior base the three alternate only yielded to the blow, and that the division there took place at a certain determinate angle. The three intermediate edges resisted the division; but in applying the same force to the inferior base of the crystal the intermediate edges only yielded. By following up the cleavage in the natural directions thus pointed out, the new-formed faces met together, and he at length obtained an *obtuse rhombohedron of definite angles*, [see the engraving of Iceland spar,] which was further divisible, in the direction of its planes, into an indefinite number of similar smaller rhombohedrons. He also found *that any crystal of calcareous spar, of whatever exterior form, could, by careful cleavage, be resolved into similar solids*, and into no other regular geometrical shape."—DANIELL'S *Introduction to the Study of Chemical Philosophy*.

The purest sort of carbonate of lime that occurs in nature, is termed ICELAND SPAR, and this is found in the same form as that of the central nucleus discovered by M. Haüy in every other variety of calcareous spar, namely, an obtuse rhombohedron, which is the *primitive* form, as it is called, of the mineral. Any deviation therefrom is considered as a *secondary* and subsequent alteration. Iceland spar is transparent, and moderately hard, but susceptible of a high polish. This substance possesses considerable interest in relation to the study of light. It is well known that when rays of light fall obliquely upon a plate of glass, a portion of the rays are reflected upon surrounding objects, and part are bent, or refracted, as they pass onwards through the glass. But certain transparent bodies, as rock-crystal, but especially Iceland spar, divide the refracted portion of the light into two pencils, as shewn in the accompanying diagram. Place the rhomb of Iceland spar, A, B, C, D, over a black line drawn upon a sheet of paper, *p q*, and look through the crystal with the eye stationed at R; the line will appear doubled like *p q* and *m n*. A black dot will likewise be doubled, as *e o*. The pencil of light R *r* is separated, by the peculiar arrangement of the molecules of the

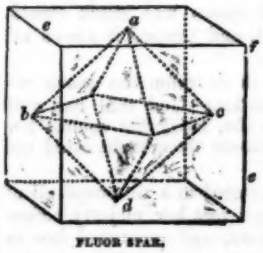



ICELAND SPAR.

crystal, into two rays, *r e* and *r o*. These rays emerge at the points *e o*, and afterwards pursue paths parallel to R *r*. Hence it appears that a ray of light, in passing through Iceland spar, is split into two by some mechanical force residing in the crystal.

FLUOR SPAR is a mineral found in many parts of the world, but in great beauty and abundance in England, especially in Derbyshire, where it is commonly called Blue John. Its name of fluor is derived from the use to which the substance has been applied as a flux for promoting the fusion of other minerals. Its colours are extremely various. It generally occurs in veins, but in the Odin mine of Castleton, in Derbyshire, is found in detached masses, from an inch to more than a foot in thickness. The structure of these pieces is rayed, and the colours, which are various, are disposed in concentric bands. This is the only variety that admits of being turned by the lathe into vases and other ornamental articles.

Fluor spar is usually found in cubic crystals; see the accompanying figure, letters *e f*, *e f*. If we apply the edge of a knife with a little dexterity to its angles, we shall find that its eight solid corners may be removed, and the nucleus will be the octohedron *a*, *b*, *c*, *d*. Such a regular cleavage must obviously depend upon great regularity of internal structure. This subject is further illustrated by the spontaneous dissection of crystalline solids by liquid solvents, which will be noticed in an early number of the *Magazine*.




FLUOR SPAR.

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BY far the greater part of all which we believe, and of all which, in a common way of speaking, we are said to *know*, depends upon testimony. Men rely confidently upon testimony in conducting their most important concerns: and the human mind is so formed that it is more natural for us to *trust* to testimony than to *doubt* it. We should believe it entirely, and constantly, if we did not find that it is sometimes fallacious.

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